



## **Proposed Work Plan for Removal Action at Fort Irwin Sites FTIR-38, Area 2 and FTIR-40, Area 1.1**

The Army invites the public to review and comment on the Draft Final Removal Action Work Plan (RAW) and a Draft Mitigated Negative Declaration at two gunnery ranges at Fort Irwin National Training Center. Portions of these two sites are contaminated with lead, aluminum, and copper. This contamination could pose a threat to wildlife in the area. The two sites are Fort Irwin (FTIR)-38 (Goldstone Lake Mortar and Small Arms Range) and FTIR-40 (Part of the Mojave Anti-Aircraft Range). At FTIR-38 the contaminated portion is known as Area 2. At FTIR-40 the contaminated portion is known as Area 1.1. The Draft Final Action Work Plan, Draft Mitigated Negative Declaration, CEQA, and other related documents about the site are available for public review and comment from June 30, 2005 through August 1, 2005 (See Page 4 of this fact sheet for details on where to find the Draft RAW and Draft Mitigated Negative Declaration and how to submit comments). The California Department of Toxic Substance Control (DTSC), which is the regulatory agency overseeing the environmental cleanup at Fort Irwin, has reviewed and approved the Army's proposal.

Fort Irwin, National Training Center encompasses over 1,000 square miles and is located approximately 35 miles north of Barstow, California, within the Mojave Desert. FTIR-38, Area 2 and FTIR-40, Area 1.1 are located along the western central portion of Fort Irwin within the 57 square-mile NASA Goldstone Complex leased to NASA by the Army.

Site FTIR-38, Area 2 encompasses approximately 5-acres along the eastern edge of Goldstone Dry Lake. Site FTIR-40, Area 1.1 is about 1-acre in size in the southern portion of the Goldstone Complex.

### **Fort Irwin History**

In 1940, President Franklin Roosevelt established the Mojave Anti-Aircraft Range, a military reservation of approximately 1,000 square miles in the area of the present Fort Irwin. In 1942, the Mojave Anti-Aircraft Range was renamed Camp Irwin. Two years later, Camp Irwin was deactivated and placed on surplus status.

Camp Irwin reopened its gates in 1951 as the Armored Combat Training Area. In March 1958, the Jet Propulsion Laboratory, then under contract to the U.S. Army Ordnance Corps, chose a site on government-owned land as the location of their Deep Space Communications station at the Goldstone Dry Lake area at Fort Irwin in the Mojave Desert. The entire Goldstone Complex is leased from the U.S. Army by NASA.

On August 9, 1979, the Department of the Army announced that Fort Irwin had been selected as the site for the National Training Center. The National Training

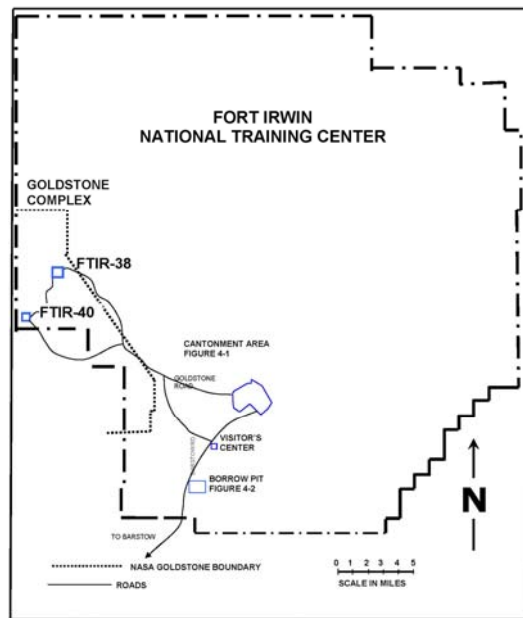


Center was officially activated October 16, 1980 and Fort Irwin returned to active status on July 1, 1981. The National Training Center and Fort Irwin continue to serve as the Army's premier training center.

### Site History

FTIR-38 is known as the Goldstone Lake Mortar and Small Arms Range. FTIR-38, Area 2 consists of 18 soil berms that the Army constructed as target backstops for the anti-aircraft firing ranges. Previous investigations (Phase I Site Investigation June 1997, Screening level Human Health Risk Assessment and Ecological Risk Assessment in 1998, Remedial Investigations in May 1999, Phase II Ecological Validation Study and Remedial Investigation/Feasibility Study 2000-2003) at the site have identified lead and aluminum along with munitions metal scrap in the soil. The investigations also determined that groundwater was not impacted as a result of former site activities.

FTIR-40 was part of the Mojave Anti-Aircraft Range and is located on the eastern edge of low hills above the western edge of the Goldstone Dry Lake. FTIR-40 consists of a small wash containing discarded metal debris. A soil mound with municipal waste debris and metal scrap is located within Area 1.1. Previous investigations (please see Administrative record, Appendix A, Draft Final RAW) at the site have identified lead and copper along with munitions metal scrap in the soil. The investigations also determined that groundwater was not impacted by site activities.



Site Location Map, Fort Irwin, California

### Potential Risk of Metals in Soil

The site is in a controlled site within a secured area. The area is currently not being used for any activities thereby minimizing the chance for people to come into contact with the soil. An ecological risk assessment was conducted on the two sites. It indicated that locally the concentrations of three metals in the soil were high enough to be a potential risk to burrowing mammals, specifically the Mojave ground squirrel (potential exposure pathway is via food ingestion, incidental soil, and dermal exposure), which is a California threatened species. Site FTIR-38 Area 2 is habitat for the burrowing owl which is a special status species.



### FTIR-40

The site-specific cleanup levels established by the ecological risk assessment for the three metals, are as follows:

Lead: 290 milligrams per kilogram  
(mg/kg)

Copper: 10,900 mg/kg

Aluminum: 23,600 mg/kg

These site specific cleanup levels are all below the Preliminary Remediation Goals established by the U.S. EPA for direct contact with soil by an industrial worker.

### Cleanup Options Considered

Various cleanup alternatives for the two sites were considered. They include:

1. No Action
2. Institutional controls, such restrictions on future land use
3. Institutional controls with debris removal
4. Removal of soil contaminated with metals above the site specific cleanup levels, debris removal, contaminated soil disposal and backfilling of excavations as necessary to

cover soil with residual contamination.

5. Clean closure by removing all soil with metal contamination above the cleanup levels.

For each option, the protectiveness of human health and the environment, cost-effectiveness, and feasibility were evaluated.

### The Proposed Cleanup Action

Alternative 4 was selected because it is protective of human health and ecological receptors, under current and future land use scenarios, meets the intent of Applicable or Relevant and Appropriate Regulations (ARARs, presented in the Draft Final RAW), achieves the remedial action objects, and is more cost effective than Alternative 5. Alternative 4 is protective of the Mojave ground squirrel and of the American badger (may forage in the areas). After contaminated soil material has been excavated and removed, the berms at FTIR-38 Area 2 will be flattened to grade. Any special status species (i.e. Mohave ground squirrel and burrowing owls) found prior to and during field activities will be relocated to new habitats that are going to be established for these species. Mitigations measures for both the Mohave ground squirrel and the burrowing owls have been drafted and approved by the California Department of Fish and Game and DTSC (Appendix H of the RAW). Alternative 4 includes access and land use restrictions. Access restrictions include site security. Land use restrictions have been developed and are enforced by the planning group at Fort Irwin through the use of a Master Plan. Currently there are no future plans for



further use of Site FTIR-38 and FTIR-40. If ownership of the base is transferred to private or non-federal entities, land use restrictions would be established to maintain this area for industrial use only. Excavation and removal activities include:

- Removal of soil that exceeds the site specific cleanup levels that is protective of the environment.
- Disposal of debris and contaminated soil at a licensed disposal facility.
- Backfilling with clean soil all areas where residual levels of metal contamination remain and where excavations extend below ground surface. At FTIR-38 Area 2, the remaining berm structures will be flattened to grade.

We expect the soil cleanup to take 1 to 2 months. Additionally, the Fort Irwin Base Master Plan will be updated to restrict the use of the property to industrial, commercial or military training only. This ensures that the site is not used for residential or sensitive uses such as a day care center.

### **Offsite Impacts of the Removal Action Activities**

Most of the project activities will take place at the two sites and involve soil excavation, sieving the soil for larger fragments of metal, and loading trucks with a conveyor belt or other operationally suitable methods. No impact to adjacent properties is anticipated. However, this work includes transporting soil along public streets. To protect the public and workers, the vehicles leaving the site will be decontaminated and dust control

(including the wetting and covering of soils) and other measures will be taken.

### **Findings about the effect of the cleanup action on the environment**

As required by State law (the California Environmental Quality Act, CEQA), DTSC studied the possible effect of the cleanup actions on the environment. For example, DTSC looked at whether the excavation of soil would create air or surface water pollution, disturb wildlife or habitat, or interfere with traffic patterns along routes that will be used to transport the debris and soil. DTSC determined that the proposed cleanup activities will not have a significant effect on human health. DTSC also determined that potential effects to wildlife and the environment could be prevented by taking certain precautions, or mitigation measures. DTSC's findings is documented in a draft "Mitigated Negative Declaration" which is also available for review and comment at the same time as the draft final RAW. The mitigation measures to address the temporary effects on the environment include conducting excavation activities during a time when any Mojave ground squirrel is less likely to be in their borrows and having a qualified wildlife biologist onsite during excavation activities. The qualified wildlife biologist will divert or relocate any Mojave ground squirrels, burrowing owls, or other species away from the excavation area if encountered prior to and during excavation activities.

### **Where to find the documents**

The Draft Final RAW, CEQA, and other documents related to the project are



available at the San Bernadino County Library, Barstow Branch, 304 East Buena Vista, Barstow, CA 92311, contact Joyce Burk at Phone no. (760) 256-4850.

Also, the documents are available at DTSC office:

5796 Corporate Avenue,  
Cypress, CA 90630

Please call the File Room at (714) 484-5336 to make an appointment.

### **Where to send comments**

Comments on the draft final RAW and the Mitigated Negative Declaration must be postmarked or emailed by August 1, 2005, and sent to both:

Major John Clearwater  
Public Affairs Office  
Attn: AFZJ-PA, P O Box 105067  
Fort Irwin, CA 92310-5-67  
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Para información en Español por favor comuníquese con Leticia Hernández al teléfono (714) 484-5488.

### **Notice to the Hearing Impaired**

You can obtain additional information by using the California State Relay at 1-888-877-5378 (TDD). Ask to contact Leticia Hernandez at (714) 484-5488.